



MATERNAL MORTALITY ACTION PLAN

JUNE 2019

ARIZONA DEPARTMENT OF HEALTH SERVICES

**150 N. 18TH AVENUE
PHOENIX, ARIZONA 85007**

EXECUTIVE SUMMARY

Maternal mortality has dramatically increased in the United States since the 1980s by over 150%.¹ Maternal mortality refers to the death of woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.² The United States has one of the highest rates of maternal mortality among developed nations worldwide at a rate of 26.4 deaths per 100,000 live births.^{3,4} In addition, the United States is the only country aside from the nations of Afghanistan and Sudan where maternal deaths continue to rise.⁵ A majority of maternal deaths in the United States are due to pregnancy-related complications; amounting to approximately 700 a maternal deaths a year.¹ The top leading causes of pregnancy-related maternal deaths are: cardiovascular disease-related; other medical-non cardiovascular conditions; infection/sepsis; and hemorrhages.¹ About a third of maternal deaths happen during pregnancy, a third happen at delivery or in the week after and, and the remainder happen 1 week to 1 year after birth.⁶ Significant racial disparities are prevalent as Black women are three to four times as likely as White women to experience maternal death in the United States.^{1,7} Multiple studies have documented that maternal mortality in communities of color is not associated to socioeconomic status, educational attainment, or income level but attribute some of these disparities to lack/inconsistent access to care and limited prenatal care utilization; inconsistent use of standardized hospital protocols to address potentially fatal complications; insufficient training for providers; implicit bias present in the healthcare delivery system; among others.⁷⁻⁹

A 2017 report from the Arizona Department of Health Services' Maternal Mortality Review Program estimated Arizona's maternal mortality rate is at 25.1 deaths per 100,000 live births (2012-2015).¹⁰ This ranks Arizona 25th in the nation.¹¹ Native American/Indigenous women died at four times the rate (70.8 per 100,000 live births) compared to White non-Hispanic women (17.4 per 100,000 live births) despite Native Americans representing only 6.0% of the births. The maternal mortality rate for Hispanic/Latina women was 22.4 per 100,000 live births while the maternal mortality rate for Blacks, Asian, and Pacific Islander women combined was 44.0 per 100,000 live births. The leading causes of pregnancy-related deaths were cardiac and hypertension disorders (27%); hemorrhages (24%); and suicide, homicide or accidents (16%). Around 33% of pregnancy-related death causes could not be classified into the aforementioned groups. Approximately 89% of all maternal deaths in Arizona were categorized as preventable.¹⁰

Goals to Address Maternal Mortality:

The goals identified to address Maternal Mortality in Arizona are:

- Goal 1: Increase Pregnant and Postpartum Women's Awareness of Postpartum Warning Signs
- Goal 2: Improve Access to Care
- Goal 3: Support Workforce & Workforce Capacity
- Goal 4: Improve Surveillance
- Goal 5: Support Systems of Care

Recommendations:

Recommendations were created after multiple meetings with partners including state agencies, a thorough review of state and national data, literature and best practices. The recommendations were used to develop a 5-year work plan to address maternal mortality in Arizona. The following is a list of proposed actions included in year 1 (July 2019-June 2020) grouped by the goal statements.

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Goal 1: Increase Pregnant and Postpartum Women's Awareness of Postpartum Warning Signs

1. Identify and promote an educational program on postpartum warning signs and when to seek care for women and their families

Goal 2: Improve Access to Care

1. Expand ICD-10 codes eligible for Medicaid reimbursement to include Community Health Workers
2. Expand use of case management, care coordination, home visitation for pregnant and postpartum women
3. Expand Medicaid coverage/eligibility for pregnant women from 60 days up to one year postpartum.
4. Expand Home Visitation Programs (Health Start Program) to maternity care deserts
5. Increase the number of Medicaid and safety net providers that offer prenatal care services in high need primary care health professional shortage areas
6. Appropriate additional funding to the State Loan Repayment Program to provide new incentives (stipends) for primary care providers (Family Practice, OB-GYN) that offer prenatal care services in high need primary care health professional shortage area
7. Appropriate funds for the purchase and set up of telemedicine equipment for providing care to pregnant women

Goal 3: Support Workforce & Workforce Capacity

1. Identify equipment needs to address maternal emergencies in rural and remote areas
2. HRPP to facilitate discussions with the four large hospital systems; Abrazo, Banner, Dignity and Honor Health to create internal processes for triage and consultation for antepartum, intrapartum, and postpartum care.
3. Assist hospital systems in establishing internal processes for appropriately transporting of obstetrical patients to/from their associated facilities and emergency departments

Goal 4: Improve Surveillance of Maternal Deaths and Severe Maternal Morbidity

1. Develop a staffing plan and secure state and federal funds for the Maternal Mortality Review Program
2. Enhance data sharing and record completeness of maternal deaths
3. Execute SB 1040 Advisory Committee on Maternal Fatalities and Morbidities
4. Follow CDC guidelines for best practice to generate data-driven actionable recommendations for prevention on each maternal death

Goal 5: Support Systems of Care

1. Become a state that is part of the AIM initiative
2. Identify the appropriate AIM Maternity Safety Bundles
3. Establish surveillance and data sharing agreements for AIM implementation

METHODS

The Bureau of Women's and Children's Health, Arizona's Title V Maternal and Child Health Program, in partnership with the Arizona Perinatal Trust and the March of Dimes are leading Arizona's efforts to reduce maternal fatalities and morbidities through a collaborative process. A Maternal Health Taskforce was formed on October 30, 2018 and engaged over 36 stakeholders representing the state agencies, maternal health experts, healthcare systems, and organizations including the Governor's Office. The task

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force identified the following priority strategies required to coordinate an effective approach to reducing severe maternal morbidity (SMM) and maternal mortality (MM); sustained partnership with the Alliance for Innovation on Maternal Health (AIM); engage providers and patients; secure funding; and expand the scope of data analysis with respect to racial disparities; and continuous communication with stakeholders. In addition stakeholders requested that more tribal partners be engaged in the conversation since the data suggests that American Indian/Native American women are disproportionately afflicted in Arizona. Thus on February 1, 2018 a second stakeholder meeting was convened with the support of the ADHS' Native American Liaison to discuss Tribal SMM and MM. In addition the Bureau hosted a facilitated stakeholder meeting to seek input and prioritization of the proposed tasks addressing maternal mortality found in this plan. The recommendations were developed after thorough review of literature and existing reports from federal and non-profit organizations.

DEFINITIONS

Maternal Mortality: Number of deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within one (1) year of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 100,000 births.

Severe Maternal Morbidity (SMM): Severe Maternal Morbidity is part of a continuum from mild adverse effects to life-threatening events or death. SMM includes unexpected outcomes of labor and delivery that lead to significant short- or long-term consequences to a woman's health. Some of these unexpected pregnancy, delivery and postpartum complications are hemorrhage, organ failure and stroke. Suffering from SMM may result in an extended hospital stay, major surgery, other medical interventions or death. SMM does not only affect the health of the women as their fetuses/neonates may suffer adverse outcomes like low birth weight, premature birth or even death.

Arizona Alliance for Community Health Centers (AACHC): AACHC is the Primary Care Association (pca) for the State of Arizona. All states have one designated PCA to advance the expansion of the Health Center Program and advocate for the health care interests of the medically underserved and uninsured while improving access to affordable quality healthcare.

Arizona Coalition to End Sexual and Domestic Violence in Arizona (ACESDV): ACESDV works to increase public awareness about the issues of sexual and domestic violence; enhance the safety of and services for sexual and domestic violence victims and survivors; and sexual and domestic violence in Arizona communities.

Arizona Family Health Partnership (AFHP): Arizona Family Health Partnership is a private, not-for-profit organization dedicated to making reproductive healthcare and education available and accessible to all women, men and teens in Arizona, even if they lack health insurance or money.

Arizona Public Health Association (AZPHA): AZPHA is a membership organization that works to improve the level of health and well-being for all Arizonans through advocacy, professional development and networking.

Arizona Health Care Cost Containment System (AHCCCS) Arizona Health Care Cost Containment System (written as AHCCCS and pronounced 'access') is Arizona's Medicaid program. Medicaid is a federal

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healthcare program jointly funded by the federal and state governments for individuals and families who may qualify for acute or long-term services.

Arizona Hospital and Healthcare Association (AZHHA): As the champion for healthcare leadership in Arizona, AzHHA and its member hospitals and healthcare partners explore ideas and take collaborative action at the state capitol, in healthcare settings, and at home to attain the best care and health outcomes for Arizonans.

The American College of Obstetricians and Gynecologists (ACOG): ACOG is a membership organization dedicated to the advancement of women's health care and the professional and socioeconomic interests of its members through continuing medical education, practice, research, and advocacy.

Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN): AWHONN is a nonprofit organization that empowers and supports nurses caring for women, newborns, and their families through research, education, and advocacy.

The Alliance for Innovation on Maternal Health (AIM): AIM is funded through the federal Maternal and Child Health Bureau at the Human Resources and Services Administration and is a national alliance to promote consistent and safe maternity care to reduce maternal mortality and severe maternal morbidity. The purpose of the AIM program is to equip, empower and embolden every state, perinatal quality collaborative, hospital network/system, birth facility and maternity care provider in the U.S to significantly reduce severe maternal morbidity and maternal mortality through proven implementation of consistent maternity care practices that are outlined in maternal safety bundles (action systems),

Arizona Perinatal Trust (APT): APT is a 501(c) (3) nonprofit, was established in September 1980. The Trust is dedicated to improving the health of Arizona's mothers and babies, and is governed by a volunteer Board of Trustees and Board of Directors. Arizona Perinatal Trust (APT) has three main components; certification, perinatal education, and perinatal data analysis, which together form the core of their work.

Arizona Maternal Mortality Review Program (MMRP): The Arizona Maternal Mortality Review Program has supported the reviews of all maternal deaths within the State since the program's inception in 2012. The MMRP provides the administrative, epidemiological, and logistical support to the Arizona Maternal Mortality Review Committee.

Arizona Maternal Mortality Review Committee (MMRC): The Arizona Maternal Mortality Review Committee is multidisciplinary team that includes clinicians from urban and rural health centers, public health professionals and community service providers that meet monthly to review maternal deaths in order to identify preventative factors and provide actionable recommendations for level specific changes. The review committee classifies maternal deaths into one of the four following categories: pregnancy related death, pregnancy associated death, not pregnancy related or associated, and unable to determine. The committee identifies the preventability of each maternal death.

Community Health Worker (CHW): A community health worker are members of a community who are chosen by community members or organizations to provide basic health and medical care to their community capable of providing preventive, promotional and rehabilitation care to these communities.

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Review to Action: Review to Action is a resource developed by the Association of Maternal and Child Health Programs (AMCHP) in partnership with the CDC Foundation and the CDC Division of Reproductive Health. Review to Action is a product of a larger initiative entitled, Building U.S. Capacity to Review and Prevent Maternal Deaths led by the CDC Foundation that also includes the Maternal Mortality Review Information Application, or MMRIA. The objectives of Review to Action include: assist states without a MMRC in gathering resources, tools, and support to build political and social will to establish a review committee; connect states with a MMRC to their peers to share forms, processes, procedures, and strategies to build capacity to conduct reviews and translate findings into action; raise awareness of the critical role maternal mortality review committees play in eliminating preventable maternal deaths and promoting the health and wellness of expecting and new mothers.

Health Current: Health Current is the health information exchange (HIE) that helps partners transform care by bringing together communities and information across Arizona.

Health System Alliance of Arizona (HSAA): HSAA is an advocacy organization that represents the interests of large, integrated health systems across Arizona.

Health Start Program (HSP): The Health Start Program utilizes community health workers to provide education, support, and advocacy services to pregnant/postpartum women and their families in targeted communities across the state.

High Risk Perinatal Program (HRPP): The High Risk Perinatal Program (HRPP) is a comprehensive, statewide system of services dedicated to reducing maternal and infant mortality (deaths) and morbidity (abnormalities that may impact a child's growth and development). The program provides a safety net for Arizona families, to ensure the most appropriate level of care surrounding birth as well as early identification and support for the child's developmental needs.

Indian Health Service (IHS): is an operating division within the U.S. Department of Health and Human Services. IHS is responsible for providing direct medical and public health services to members of federally-recognized Native American Tribes and Alaska Native people.

Tribal 638 Healthcare Facility (638s): Tribal Contract or Compact Health Centers (also called a 638 contract or compact) are operated by Tribes or Tribal organizations and Urban Indian Health Centers are outpatient health care programs and facilities that specialize in caring for American Indians and Alaska natives. They are operated under the Indian Self-Determination Act.

March of Dimes (MoD): MoD is a United States nonprofit organization that works to improve the health of mothers and babies

Maternal-Fetal Medicine Subspecialist (MFM): A maternal-fetal medicine (MFM) subspecialist is an ObGyn physician who has completed an additional two to three years of education and training. MFM subspecialists are high-risk pregnancy experts. For pregnant women with chronic health problems, MFM subspecialists work to keep the woman as healthy as possible while her body changes and her baby grow. MFM subspecialists also care for women who face unexpected problems that develop during pregnancy, such as early labor, bleeding, or high blood pressure.

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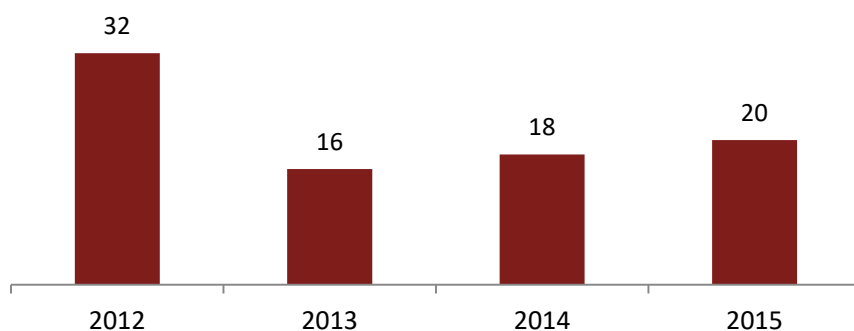
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| Goal | 2-year | 5-year |
|--|--------|--------|
| Reduce the overall maternal mortality rate | 5% | 10% |
| (Base: 25.1 per 100,000 live births) | (24.9) | (22.6) |

Maternal Mortality Rate (2012-2015):
25.1 per 100,000 live births

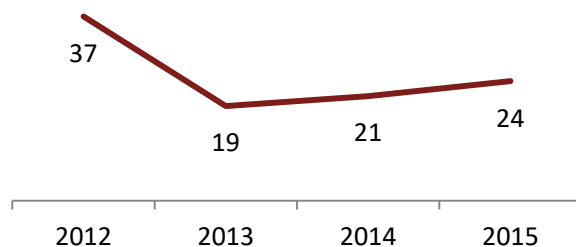
Maternal Deaths



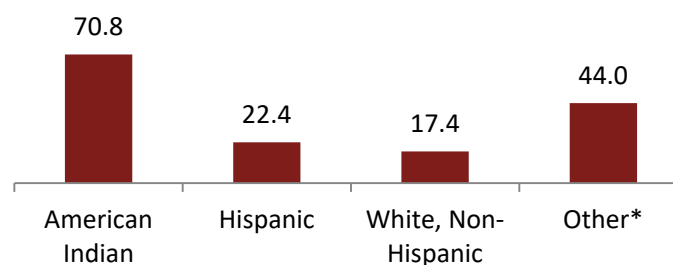
Activity Updates:

- Strengthened the Maternal Mortality Review Program
- Published a report on 2012-2015 maternal deaths
- Established a statewide Maternal Health Taskforce
- Established the advisory committee on maternal fatalities and morbidity (SB 1040)
- Applied for participation in the Alliance for Innovation on Maternal Health (AIM)
- Secured an appropriation of \$1M for distribution to rural hospitals located in health professional shortage areas for the purchase of prenatal care telemedicine equipment.

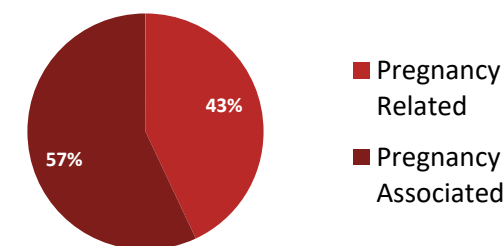
Maternal Death Rate per 100,000 Live Births



Maternal Mortality Rates per 100,000 Live Births by Race/Ethnicity (2012-2015)



Maternal Death Type (2012-2015)



Recommendations

| Goals | Recommendations | Performance Measures |
|---------------|--|--|
| GOAL 1 | <p>Increase pregnant and postpartum women’s awareness on postpartum warning signs</p> <ol style="list-style-type: none"> 1. Identify and promote an education program on postpartum warning signs | <ul style="list-style-type: none"> • By June 30, 2020, complete 100% of the action items in the recommendation brief. • By June 30, 2020, assess the percentage of women that receive a postpartum checkup |
| GOAL 2 | <p>Improve the access to care for pregnant and postpartum women in Arizona</p> <ol style="list-style-type: none"> 1. Expand use of case management, care coordination, and home visitation 2. Explore Medicaid eligibility feasibility to allow presumptive eligibility for pregnant women to increase early prenatal care access 3. Explore Medicaid eligibility feasibility for pregnant women from 60 days to 1 year postpartum 4. Expand Health Start Program/Home Visitation 5. Support high risk mothers throughout pregnancy 6. Strengthen prenatal care services in high need primary care health shortage areas 7. Increase promotion of State Loan Repayment Program 8. Enhance telemedicine systems | <ul style="list-style-type: none"> • By June 30, 2020, complete 100% of the action items in the Issue Action Plan • By June 30, 2020, assess prenatal care utilization, entry into prenatal care, and postpartum visit attendance. |
| GOAL 3 | <p>Support workforce and workforce capacity that serve pregnant and postpartum women in Arizona</p> <ol style="list-style-type: none"> 1. Identify equipment needs for hospitals and freestanding centers 2. Create internal processes for triage and consultation 3. Update High Risk Perinatal Program (HRPP) Policies and Procedures | <ul style="list-style-type: none"> • By June 30, 2020, complete 100% of the action items in the recommendation brief. |
| GOAL 4 | <p>Improve surveillance of maternal mortalities and morbidities</p> <ol style="list-style-type: none"> 1. Enhance funding and staffing of Maternal Mortality Review Program 2. Implement CDC Guidelines for best practice for MMRP 3. Convene Advisory Committee on Maternal Fatalities and Morbidities and submit Recommendation Report 4. Improve data sharing and record completeness | <ul style="list-style-type: none"> • By June 30, 2020, complete 100% of the action items in the recommendation brief. • By May 30, 2020, conduct routine surveillance on maternal mortality and severe morbidity |
| GOAL 5 | <p>Support the systems of care that serve pregnant and postpartum women in Arizona</p> <ol style="list-style-type: none"> 1. Establish Alliance for Innovation on Maternal Health (AIM) Initiative 2. Select AIM Maternity Safety Bundles 3. Implement AIM surveillance and data sharing | <ul style="list-style-type: none"> • By June 30, 2020, complete 100% of the action items in the recommendation brief. • By June 30, 2020 become an established AIM state |



RECOMMENDATION BRIEF: INCREASE AWARENESS

Recommendation:

Increase pregnant and postpartum women's awareness on postpartum warning signs

Background & Gap:

All women who give birth are at risk of experiencing life-threatening conditions prior, during, or after birth. Education and information on postpartum warning signs and when to seek care is limited for pregnant and postpartum women. Language barriers exist for some pregnant and postpartum women and the healthcare systems and providers that provide care to these women. In addition, there is a lack of awareness among providers, healthcare systems, patients, and the public on ways to avoid a maternal death.

A gap in data on current provider practices, as well as availability of educational resources for prenatal and postpartum women regarding warning signs and when to seek care widens the gap. Implementation of the Pregnancy Risk Assessment Monitoring System (PRAMS) in 2017 helps to address this gap, with questions regarding prenatal and postpartum education from provider or other healthcare workers, and women's knowledge on a variety of health and safety topics. The first year's data is estimated to be available by late 2019.

Trends & Services in Arizona:

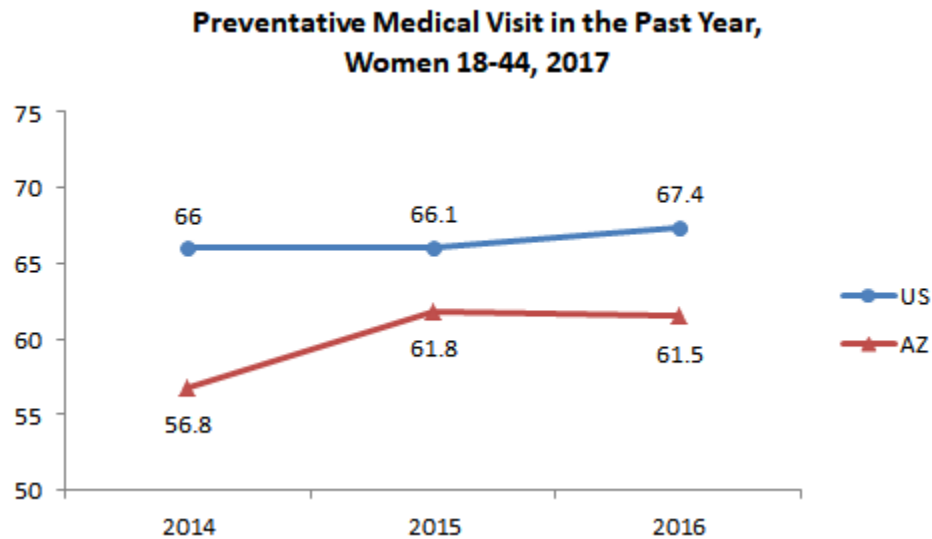
In 2017, only 1 out of 5 Arizona women of reproductive age (18-45 years) with no prior pregnancy report receiving advice from a doctor, nurse, or healthcare worker about ways to prepare for a healthy pregnancy.



In addition, only 61.5% of Arizona women of reproductive age (18-44 years) report having a preventive medical visit in the past year. This was lower than the national rate of 67.4% of women 18-44 years [graph below].

The purpose of these visits is to detect health concerns and focus on preventive care for women which may include services that improve health by preventing diseases and other health problems; screenings to check for diseases early when they may be easier to treat; and education and counseling on important health decisions including pregnancy.

RECOMMENDATION BRIEF: INCREASE AWARENESS



Action Plan/Timeline:

- **Identify and Promote an Education Program on Postpartum Warning Signs**
 - By October 31, 2019, create an inventory of educational resources that are available
 - By November 30, 2019, select an education program that can be implemented in multiple sites for piloting
 - By January 31, 2020, pilot the education program

Partner Agencies/Organizations:

- March of Dimes (MOD)
- Arizona Family Health Partnership (AFHP)
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)
- Arizona Alliance for Community Health Centers (AACHC)

Funding & Source:

Metrics:

1. By June 30, 2020, complete 100% of the action items in the increasing awareness recommendation brief.
2. By June 30, 2020, assess the percentage of women that receive a postpartum checkup.

Data Source:

Behavioral Risk Factor Surveillance System (BRFSS), 2016 and 2017

RECOMMENDATION BRIEF: ACCESS TO CARE

Recommendation:

Improve the access to care for pregnant and postpartum women in Arizona

Background & Gap:

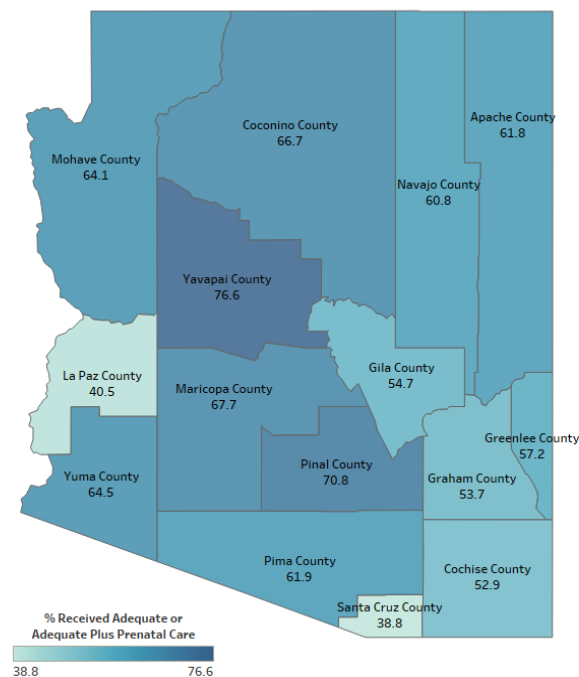
Arizona has 187 primary care health professional shortage areas, with rural and remote areas of the state lacking adequate prenatal care service and staffing. There is a limited care coordination, case management, and home visiting services available for pregnant and postpartum women. Lack of health insurance coverage for postpartum women is another challenge and possible contributor to maternal mortality, specifically among Medicaid clients. Currently Arizona's Medicaid or the Children's Health Insurance Program (CHIP) coverage for pregnant women does not include presumptive eligibility to initiate prenatal care early and coverage is limited to only 60 days postpartum for those with pregnancy-related Medicaid coverage. There is also a lack of insurance reimbursement for Community Health Workers who can provide basic health information and preventive care to communities in need.

Trends & Services in Arizona:

In 2015-2018, 68.4% of Arizona resident births began prenatal care in the first trimester of pregnancy. Among American Indian women, 58.8% began prenatal care in the first trimester, followed by 62.2% of Black women, and 63.7% of Hispanic women, compared to 74.5% of White, non-Hispanic women.

Using a measure of prenatal care adequacy, which accounts for both time of entry into prenatal care and number of prenatal care visits, 66.1% of Arizona resident births had adequate prenatal care or more. Additionally, 7.6% of Arizona resident births had no prenatal care. Adequacy of prenatal care was lowest for younger women, American Indian women, Black women, Hispanic women, less educated women, and births paid by IHS, AHCCCS, or self-pay.

Adequacy of Prenatal Care by County, Arizona Residents, 2015-2018



Action Plan/Timeline:

- **Expand Use of Case Management, Care Coordination, and Home Visitation**
 - By June 30, 2020, expand the eligibility of pregnant and postpartum women to participate in existing case management, care coordination, and home visitation programs
 - By June 30, 2020, promote existing services to pregnant and postpartum women

RECOMMENDATION BRIEF: ACCESS TO CARE

- **Update Medicaid eligibility requirements to allow presumptive eligibility for pregnant women to increase early prenatal care access**
 - By April 30, 2020, conduct a needs assessment around access and utility of prenatal care.
 - By June 30, 2020, conduct a feasibility study to explore presumptive Medicaid eligibility for pregnant women.
- **Expand Medicaid coverage/eligibility for pregnant women from 60 days to 1 year postpartum.**
 - By April 30, 2020, conduct a needs assessment around access and utility of prenatal care and postpartum care.
 - By June 30, 2020, conduct a feasibility study to explore Medicaid coverage expansion from 60 days to 1 year postpartum.
- **Expand Health Start Program/Home Visitation**
 - By June 30, 2020, allocate additional funds to the Health Start program for expansion into maternity care deserts and other areas of limited access to maternal care
- **Support High Risk Mothers Throughout Pregnancy**
 - By January 30, 2020, investigate the benefits of HRPP nurses visiting high risk mothers prior to birth on recommendation of MFMs
 - By June 30, 2020, identify funds for implementation of HRPP nurses visiting high risk mothers prior to birth on recommendation of MFMs
- **Prenatal Care Services in High Need Primary Care Health Shortage Areas**
 - By June 30, 2020, work with insurance plans/payers to expand coverage to high need primary care areas, and for additional prenatal care services
 - By June 30, 2020, work with insurance plans/payers currently in the area to strengthen current plans/models for coverage of prenatal care services
- **State Loan Repayment Program**
 - By September 30, 2019, increase promotion of the state loan repayment program for prenatal care providers in rural and high need primary care health professional shortage areas
 - By May 31, 2020, identify and support initiatives that increase program funding
 - By June 30, 2020, distribute 100% of funds for state loan repayment
- **Telemedicine Systems**
 - By August 31, 2019, release a request for proposals (RFP) to identify recipients of monies for the purchase of sonogram and telemedicine equipment for providing care to pregnant women.
 - By October 31, 2019, Identify recipients for state rural telemedicine funding opportunity
 - By November 30, 2019, distribute 100% of funds to awarded recipients for purchase of telemedicine equipment

Agencies and Organizations Impacted:

- Arizona Health Care Cost Containment System (AHCCCS)
- Arizona Public Health Association (AZPHA)

RECOMMENDATION BRIEF: ACCESS TO CARE

- Arizona Alliance for Community Health Centers (AACHC)
- Arizona Coalition to End Sexual & Domestic Violence (ACESDV)
- American College of Obstetricians and Gynecologists (ACOG)
- Arizona Hospital and Healthcare Association (AZHHA)
- Health System Alliance of Arizona (HSAA)

Funding & Source:

Metrics:

1. By June 30, 2020, complete 100% of the action items in the access to care recommendation brief.
2. By June 30, 2020, assess prenatal care utilization, entry into prenatal care, and postpartum visit attendance.

Data Sources:

Arizona Vital Statistics, 2015-2018

RECOMMENDATION BRIEF: SUPPORT WORKFORCE CAPACITY

Recommendation:

Support workforce capacity to better serve pregnant and postpartum women in Arizona

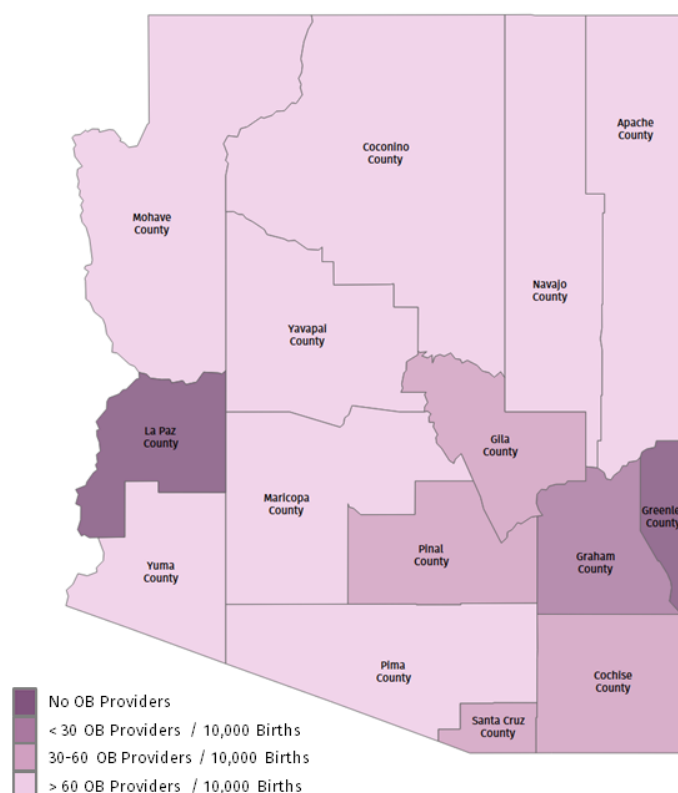
Background & Gap:

There is a lack of equipment and skills to use equipment. There is a need to increase the knowledge of emergency department clinicians to deal with issues of antepartum, intrapartum and postpartum women. Additionally, the current High Risk Perinatal Program (HRPP) Consultation and Transport Line does not include transfer centers, hospitals without obstetric services, and free-standing EDs.

Trends & Services in Arizona:

Availability of obstetric providers, which can include obstetrician/gynecologists (OB/GYN), certified nurse midwives (CNM), and family physicians, varies greatly across Arizona. According to an analysis conducted by the March of Dimes of 2016 birth data, nearly half (7 of 15) of Arizona's counties had less than 60 obstetric providers per 10,000 births. Additionally, both La Paz County and Greenlee County lacked any obstetric providers.¹

Obstetric Provider Availability, 2016



Action Plan/Timeline:

- **Equipment Needs**

- By October 30, 2019, create an inventory list of necessary equipment for hospitals, freestanding birth centers, and trauma centers

RECOMMENDATION BRIEF: SUPPORT WORKFORCE CAPACITY

- By November 30, 2019, distribute Necessary Equipment List to hospitals, freestanding birth centers and trauma centers to complete an inventory and needs request
- By February 28, 2020, create a needs assessment from the compiled data
- **Create Internal Processes for Triage and Consultation**
 - By October 31, 2019, create a standardized assessment tool to be used for maternal triage in facilities without obstetric services
 - By November 30, 2019, align maternal and neonatal transport coordination with APT required risk assessment policy
 - By December 31, 2019, HRPP Consult Workgroup to create an algorithm/workflow to support all facilities that do not have obstetric services
 - By March 31, 2020, investigate the possibility to incorporate a telemedicine program into the HRPP consultation line
- **High Risk Perinatal Program (HRPP) Policy and Procedure**
 - By December 31, 2019, update policy to require hospitals and systems have algorithms/workflows for triage, consultation, and transport
 - By December 31, 2019, update policy to include obstetricians in determination of transport qualification

Partner Agencies/Organizations:

- Arizona Perinatal Trust (APT)
- Arizona Hospital and Healthcare Association (AzHHA)
- Health System Alliance of Arizona (HSAA)
- Tribal 638 facilities
- Indian Health Services (IHS)

Funding & Source:

Metrics:

1. By June 30, 2020, complete 100% of the action items in the support workforce capacity recommendation brief.

Reference:

1. March of Dimes Perinatal Data Center. *Nowhere to Go: Maternity Care Deserts Across the U.S.*; 2018. https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf.

RECOMMENDATION BRIEF: IMPROVE SURVEILLANCE

Recommendation:

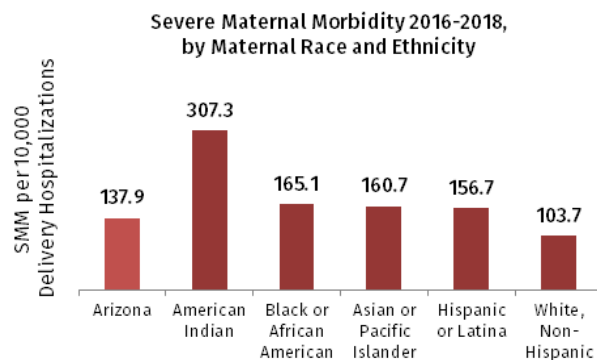
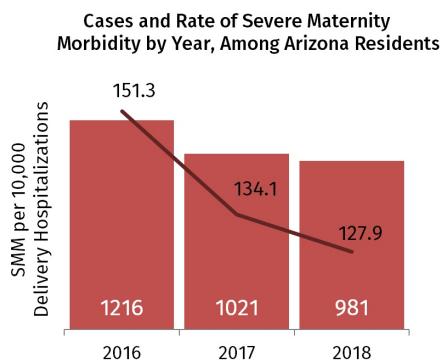
Improve surveillance of maternal mortalities and morbidities

Background & Gap:

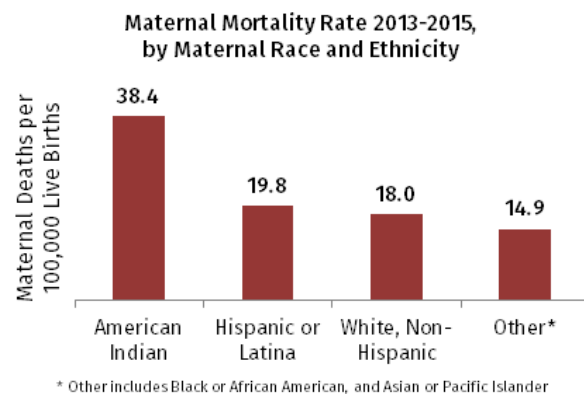
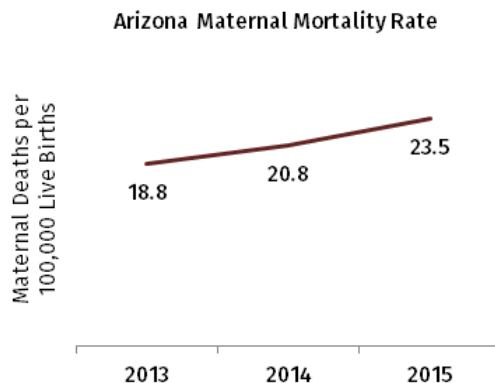
The Maternal Mortality Review Program (MMRP) has limited financial resources and is not adequately staffed. Information received for maternal death reviews is limited or incomplete especially for indigenous women. In addition non-medical records (crime, child safety, as such) are not received and inhibit the review process' ability for actionable recommendations for prevention. Lastly implementation of gold-standard practices to maternal death reviews has been delayed and inconsistent in the past.

Trends & Services in Arizona:

The rate of severe maternal morbidity (SMM) among Arizona residents for 2016-2018 was 137.9 cases per 10,000 delivery hospitalizations. American Indian women experienced nearly twice as many SMM cases as any other race and ethnicity, with a SMM rate of 307.3, and all women of color had higher SMM rates than non-Hispanic White women (103.7).



In the most recent years maternal mortality information is available, the overall maternal mortality rate (MMR) in 2013-2015 was 21.0 deaths per 100,000 live births. Similar to SMM, American Indian women experienced higher proportions of maternal deaths, with a MMR of 38.4 compared to 19.8 for Hispanic or Latina and 18.0 for non-Hispanic White.



Action Plan/Timeline:

- Funding and Staffing Plan

RECOMMENDATION BRIEF: IMPROVE SURVEILLANCE

- By August 31, 2019, assess staffing needs for MMRP
- By September 30, 2019, explore funding opportunities to fully support the MMRP
- **CDC Guidelines for Best Practice**
 - By October 31, 2019, request technical assistance from the CDC regarding best practices for maternal death reviews
 - By November 30, 2019, follow the CDC's Review to Action template to develop actionable case-specific recommendations
- **Advisory Committee on Maternal Fatalities and Morbidities (SB 1040)**
 - By July 31, 2019, appointment of Advisory Committee Members
 - By August 31, 2019, kick-off meeting Advisory Committee Members
 - By September 30, 2019, MMRC observation period begins for the Advisory Committee
 - By October 31, 2019, outline a recommendations draft
 - By November 30, 2019, present recommendations at public meeting
 - By November 30, 2019, finalize recommendations report that provides background, approach, and findings and incorporates the public's input
 - By December 31, 2019, submit Recommendations Report to the Department of Health Services; the Health and Human Services Committees of the House of Representatives and the Senate
- **Data Sharing and Record Completeness**
 - By October 31, 2019, create an internal workgroup to draft MOUs
 - By April 30, 2020, execute MOUs with identified agencies to facilitate the thorough review of maternal deaths
 - By May 31, 2020, provide technical assistance on possible Maternal Death Reporting Requirement for birthing facilities via the APT
 - By May 31, 2020, establish an internal protocol to enforce response time limit of records request

Partner Agencies/Organizations:

- Arizona Perinatal Trust (APT)
- Health Information Exchange (HIE)
- Arizona Health Care Cost Containment System (AHCCCS)
- Arizona Department of Economic Security (DES)
- County Medical Examiners (CME)
- Native American Tribal Governments (NATG)
- Maternal Mortality Review Committee (MMRC)

Funding & Source:

Metrics:

1. By June 30, 2020, complete 100% of the action items in the improve surveillance recommendation brief.
2. By May 30, 2020, conduct routine surveillance on maternal mortality and severe morbidity.

RECOMMENDATION BRIEF: IMPROVE SURVEILLANCE

Data Sources:

Arizona Hospital Discharge Database, 2016-2018

Arizona Vital Records, 2012-2015

The Arizona Maternal Mortality Review Program, 2012-2015

RECOMMENDATION BRIEF: SUPPORT SYSTEMS OF CARE

Recommendation:

Support the systems of care that serve pregnant and postpartum women in Arizona

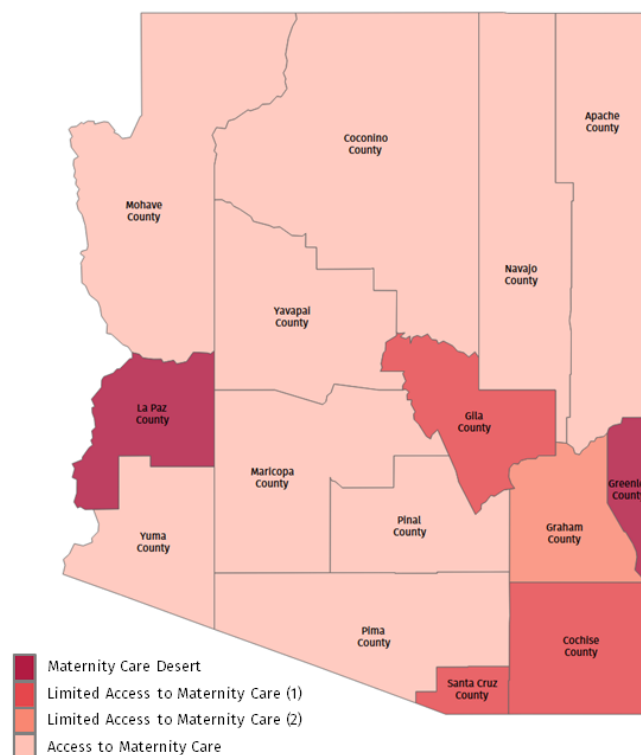
Background & Gap:

Arizona is not consistently taking advantage of national technical assistance available to conduct quality improvement initiatives that improve maternity care practices. Arizona does not have a statewide maternal care collaborative focused on Continuous Quality Improvement (CQI) and continuum of care. Current Maternal Mortality Review Committee (MMRC) recommendations to prevent death have limited potential to make significant changes.

Trends & Services in Arizona:

The increasing spread of maternity care deserts is suspected to contribute to the rise of maternal mortality. A maternity care desert refers to a geographic area where there is no availability of hospitals offering obstetric care; where women have limited to no access to health insurance; and with limited to no availability of obstetric care providers.¹ Arizona has two counties that are considered maternity care deserts, La Paz and Greenlee counties while Gila, Cochise, Santa Cruz, and Graham counties are considered areas with 'limited access to maternity care' (LAMC). These LAMC areas have less than 2 hospitals with obstetric care services and less than 60 obstetric providers per 10,000 births; they are further grouped into level 1 or level 2 based on the proportion of women are uninsured: 10% or more uninsured is level 1 while less than 10% uninsured is level 2.¹

Maternity Care Deserts and Areas of Limited Access to Maternity Care, 2016



RECOMMENDATION BRIEF: SUPPORT SYSTEMS OF CARE

Action Plan/Timeline:

- **Statewide Adoption of Alliance for Innovation on Maternal Health (AIM) Initiative**
 - By July 31, 2019, complete and submit application for Arizona to participate in ACOG Alliance for Innovation in Maternal Health (AIM) Initiative
 - By December 31, 2019, establish an AIM Coordinating Body
- **AIM Maternity Safety Bundles**
 - By December 31, 2019, learn about the AIM-supported Patient Safety Bundles and Tools that address Arizona's needs
 - By December 31, 2019, review the latest data on maternal mortality and severe maternal morbidity in Arizona
 - By February 28, 2020, select the AIM bundles to be implemented
- **AIM Surveillance and Data Sharing**
 - By February 28, 2020, create benchmarks for health care progress through AIM Data Center
 - By May 31, 2020, establish a real-time data (AIM dashboard) tracking system

Partner Agencies/Organizations:

- Alliance for Innovation on Maternal Health (AIM)
- American College of Obstetricians and Gynecologists (ACOG)
- Arizona Perinatal Trust (APT)
- March of Dimes (MoD)
- Arizona Hospital and Healthcare Association (AHHA)
- Health System Alliance of Arizona (HSAA)
- Tribal 638 Healthcare Facilities

Funding & Source:

Metrics:

1. By June 30, 2020, complete 100% of the action items in the support systems of care recommendation brief.
2. By June 30, 2020, Arizona will become an established 'AIM' state.

Source:

1. March of Dimes Perinatal Data Center. *Nowhere to Go: Maternity Care Deserts Across the U.S.*; 2018. https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf.